WORLD HUNGER

This booklet has been prepared by the Food and Agriculture Organization of the United Nations (FAO) to help World Food Day organizers throughout the world in their efforts to inform young people about issues related to hunger in the world today.

The designation employed and the presentation of material in this publication do not imply the expression of any opinion whatsoever by FAO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

INTRODUCTION

The number of men, women and children suffering from hunger around the world has been growing in recent years. On World Food Day and throughout the year people in over 140 countries have been joining together to learn about hunger and to build the common commitment and the sound strategies needed to help overcome this human tragedy.

World Food Day is observed on 16 October of each year, the anniversary of the founding of FAO. It serves as an annual reminder of the scope and toll of widespread hunger and its principal cause, poverty; it provides an opportunity to focus on specific dimensions of the problem; and it serves as a stimulus to renewed local, national and international efforts to provide all people with enough to eat and the chance to live productive lives.

In a world where enough food exists to feed everyone, hunger is a complex ethical problem.

Responding to public demand for a clear and concise introduction to the problem, this booklet was first prepared by FAO's WFD Secretariat in 1985 and is now being revised in this 1989 edition to update statistics and to focus greater attention on environmental issues related to food production. While the booklet cannot cover the subject fully in these few pages, its purpose is to

outline the basic facts about what hunger is, who it affects, why it exists and what can be done to help eliminate it. Most of the data comes directly from FAO research. It is hoped that this material will be especially useful in classroom settings, where it can be adapted to the particular needs of the culture and age group. For further information, write to:

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I. WHAT IS HUNGER?

Hunger starts with an uneasy sensation which most people have experienced when their bodies have craved food. It is a more intense and painful sensation than mere appetite, but over a short period of time, its negative health effects are not severe. Hunger can become a life-threatening condition, however, when it is allowed to continue over a longer period of time. At some point, it becomes **undernutrition**, a chronic state of hunger which is the focus of concern in this booklet. As defined by FAO, undernutrition is the state of having a dietary energy intake below the minimum energy requirement for a healthy body and a healthy, active life.

A young mother nurses her child during a famine in Ethiopia.

When the number of Calories 1/ of energy needed by our bodies exceeds the amount of energy in the food we consume, an **energy deficiency** results. An on-going loss of body energy of this type leads to a loss of weight, a progressive weakening of the body, increasing irritability and apathy and a declining level of initiative, imagination and creativity. Eventually, a hunger victim may die of starvation or of some other nutrition-related cause.

In children, the energy deficiency that can accompany hunger tends to reduce the level of exploratory activity and contributes to a slowing of physical and mental development. It also leaves the child more vulnerable to illness and disease. For example, respiratory and diarrhoeal infections are common in undernourished children and even diseases like measles can be fatal.

Often, the terms **undernutrition** and **malnutrition** are confused. **Undernutrition** is more **quantitative** and means that a person is not getting enough to eat, especially to meet their energy needs. **Malnutrition** is more **qualitative** and means that a person's diet does not include a proper mix of vitamins, minerals, proteins and energy necessary for healthy living.

A **malnourished** person may not feel hungry and may even eat too much but, like the undernourished person, may still suffer from such dietary diseases as vitamin A deficiency (which can cause blindness), iron deficiency (which leads to anaemia) or iodine deficiency (which leads to goitre).

Although the acute state of hunger known as famine receives more attention from the world's news media, it should be remembered that the great majority of hunger deaths come not from starvation, but from nutrition-related sicknesses and diseases.

1/ When the word "calories" is capitalized, it means "kilocalories", or 1,000 calories of energy.

II. HOW MANY PEOPLE SUFFER FROM HUNGER?

It is difficult to estimate precisely how many people are suffering from hunger today. Not only is the global information incomplete, but the methods of defining and measuring hunger also vary. According to FAO's estimates, about 512 million people in developing countries with market economies, or about 21% of the populations, were suffering from varying degrees of undernutrition in the mid-1980s.

Some sources estimate that 20 million people die each year from hunger-related causes, of which 14 million are children. This means that about 40,000 children die each day. The loss of human life from hunger is greater than if an atomic bomb — like the one that destroyed Hiroshima during the Second World War — were to be dropped on a densely populated area every three days.

On the positive side, the percentage of people suffering from undernourishment has declined in re-

Drought victims wait to be admitted to a refugee camp in one of the worst affected areas of the Sahelian region.

cent decades. On the negative side, as Table 1 below indicates, the actual number of undernourished people has continued to grow.

Table 1: The extent of undernutrition in developing countries

Region	1969-1971		1979-1981		1983-1985	
	(a)	(b)	(a)	(b)	(a)	(b)
Africa	92	32	110	29	140	32
Asia and the Pacific	281	29	288	24	291	22
Latin America and the Caribbean	51	18	52	15	55	14
Near East	35	22	24	12	26	11
TOTAL	460	27	475	22	512	21

(a) = Numbers of people (in millions)
(b) = Percentage of the region's population

Source: Food and Agriculture Organization of the United Nations revised and updated estimates based on methodology of the Fifth World Food Survey.

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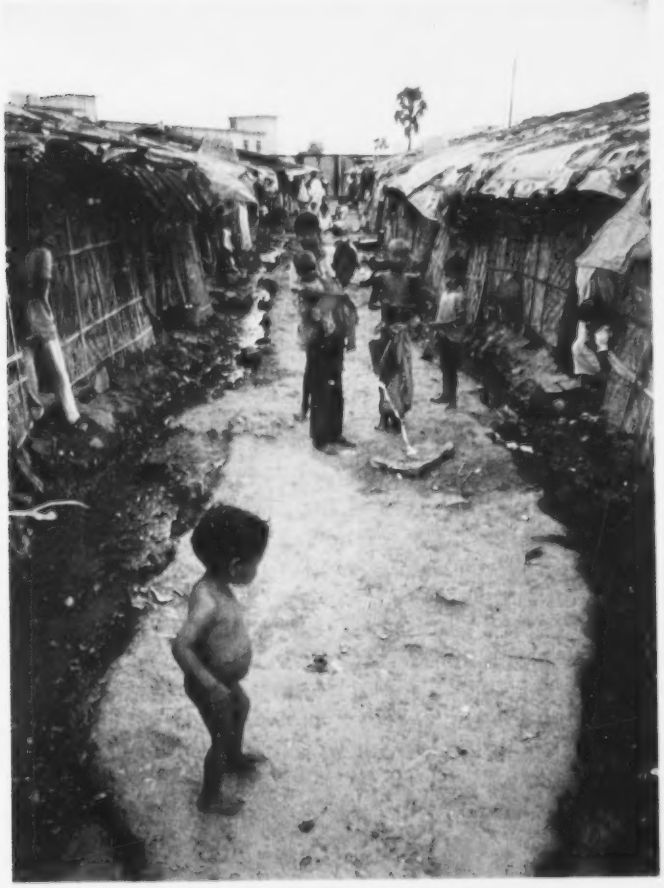
III. WHERE ARE THE HUNGRY LIKELY TO BE FOUND?

Well over half the undernourished people in the world live in the Asian region, but though Africa has a smaller population, the proportion of its population in hunger is much higher. Moreover, in particular drought-ridden and war-torn areas of Africa, the proportion of serious undernutrition is often the highest in the world.

A vast majority of the world's poor and hungry live in rural areas: an estimated 60% of the undernourished in Latin America, 70% of those in the Near East and 80-90% of those in Asia and Africa, according to the International Food Policy Research Institute. These rural poor tend to

Poor water and sanitary facilities in this shanty town in Bangladesh compound the health risks related to hunger.



be the families of landless wage labourers, sharecroppers, tenant farmers, herdsmen and fishermen.

Table 2: Regional distribution of hunger

Region	Percent of the world's undernourished people
Asia and the Pacific	57
Africa	27
Latin America and the Caribbean	11
Near East	55
TOTAL	100

Source: Food and Agriculture Organization of the United Nations: Revised and updated estimates based on methodology of the Fifth World Food Survey.

It may seem paradoxical that a high proportion of those who live in the countryside and grow food are undernourished. But this is where most of the poverty can be found. Moreover, rural areas are usually the hardest to reach with emergency food and other supplies.

In many rural areas, undernutrition is especially common in the period just before harvest. This is the time when the food stocks of a family or farm community are often exhausted and when the work demands for harvesting a new crop are the highest. Since the amount of work people are capable of depends on their calorie intake, the diet of many peasants is simply not adequate to provide the energy needed for a full day's work in the fields. Rural women, who are active in food production as well as in taking care of their families, are even more likely to suffer from undernutrition.

As a result of problems like these, the numbers of rural people migrating to crowded shanty towns and slums adjoining large cities throughout the Third World are swelling faster than ever before. These areas are characterized by poverty, unhealthy living conditions, high unemployment and, often, social upheaval. Since at least two-thirds of the population increases in developing countries are taking place in towns and cities, this volatile situation is likely to continue.

IV. IS HUNGER SIMPLY A PROBLEM OF TOO MANY PEOPLE AND NOT ENOUGH FOOD?

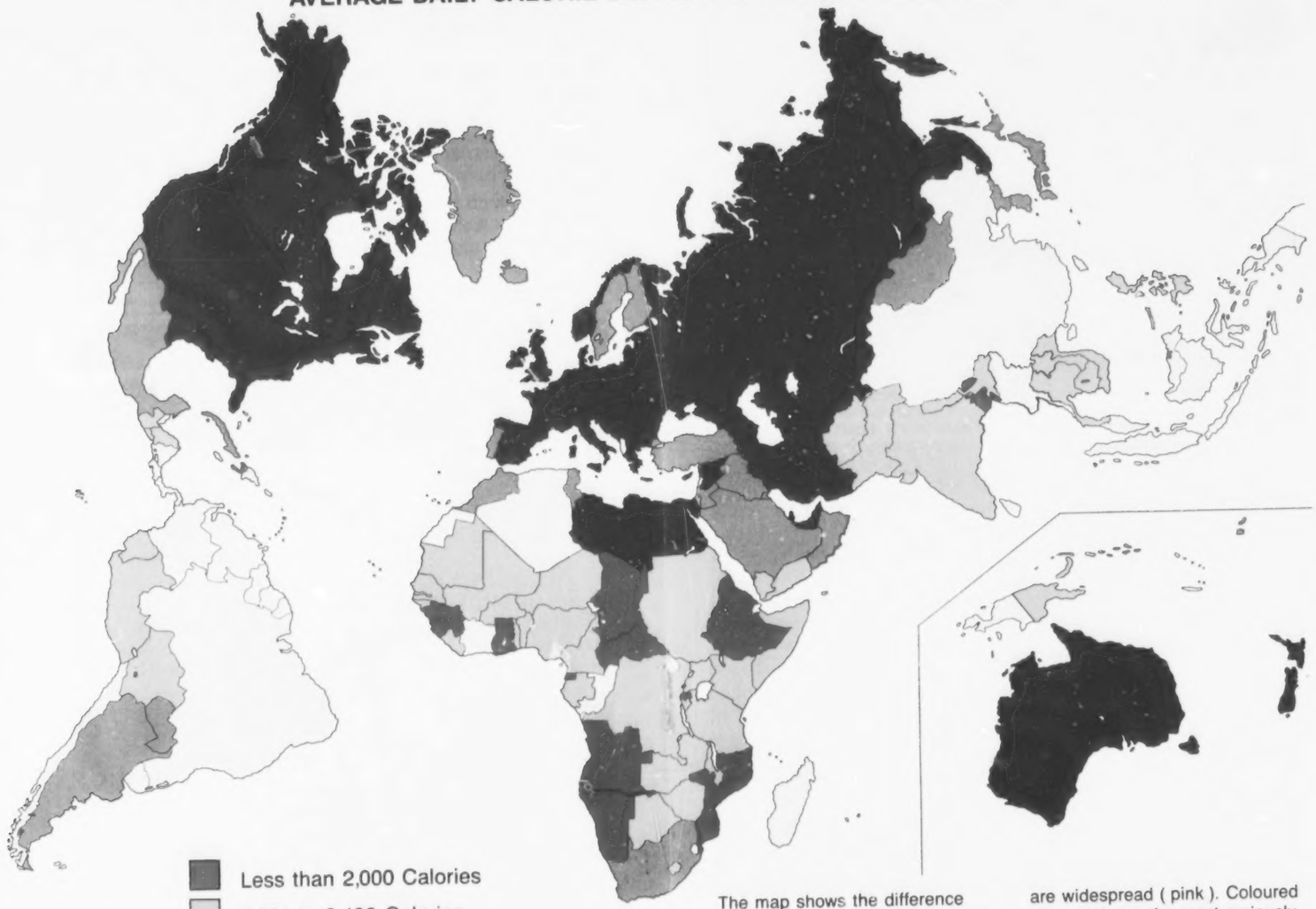
While this is often assumed to be true, the following facts should be considered:

1. **There is plenty of food in the world to feed the existing human population**

If the world food supply were to be divided equally, there would be plenty for everyone, with some to spare. In fact, the world produces 10% more food today than is needed to feed everyone.

A Bolivian girl displays the maize she is carrying in her basket.

AVERAGE DAILY CALORIE SUPPLY PER PERSON (1984-1986)



- Less than 2,000 Calories
- 2,001 to 2,400 Calories
- 2,401 to 2,800 Calories
- 2,801 to 3,200 Calories
- over 3,200 Calories

The map shows the difference between those countries in which people have largely enough to eat (dark green or pale green), those in which the average daily Calorie supply is lower (yellow) and those in which hunger and malnutrition are widespread (pink). Coloured deep pink are the most seriously affected countries, in which the average Calorie supply is critically low - under 2,000 Calories per person per day.

A few dwindling supplies of food are still available in this desert market in Chad.

Hunger, then, is not simply a matter of the quantity of food available. It is also one of distribution and of international trade imbalances which affect developing countries. Food tends to go to the countries that derive profits from trading and, in turn, to the people who have the most money.

For many years, developed countries have, by and large, enjoyed a diet much higher in calories than required for proper nutrition. As shown by the centerfold map, Calorie consumption per person in rich countries is well over 3,000 a day on average, while in the developing countries it is barely over 2,000. A person at complete rest expends about 1,600 Calories per day. The minimum number of Calories required for an active and healthy adult is 1.4 times this base rate, or an average of 2,240 Calories per day.

The current world fish catch of 75 million tonnes a year is enough for 11.6 kilograms for each person in the world, but it is distributed unequally. In practice, people in developed countries get three to four times more fish than those in developing countries - despite the fact that the former get more protein than they need.

It is possible, within limits, to increase world fishery production. However, the poor could benefit immediately if greater efforts were made to reduce post-catch losses (in some developing countries, as much as 40% of the total catch may be lost or spoiled) and, second, if the less conventional species were made into low-cost products for human consumption rather than being processed and exported from the Third World to be consumed by animals in developed countries.

2. High population densities do not necessarily result in high levels of hunger

With the exception of a few special cases — like Bangladesh — hunger and high population density do not automatically go hand in hand. Here are some basic facts to consider:

- Very densely populated countries are often rich and can import food from poorer countries, so that they are not affected by hunger. The Netherlands, for instance, has 385 inhabitants per square kilometre (km2); the Federal Republic of Germany has 248 inhabitants/km2; Japan has 319 inhabitants/km2.
- On the other hand, many poor countries affected by hunger may actually seem "underpopulated", but their land simply has not been able to support their population. Africa, for example, has a population density much less than that of Asia and yet food production there has not kept pace with population growth. The average African now has 10% less domestically-grown food to eat than ten years ago.

These contour terraces, being built by women in Peru, yield 70% more potatoes per hectare than did the old sloping fields.

• But even in countries facing constant and widespread food scarcity, there are people who eat well and in sufficient quantity. Moreover, the FAO study **Land, Food and People** concluded that although 14 individual countries in Africa do not have enough land to feed their existing populations, the continent **as a whole** has more than enough land area to do so.
• Population pressures are especially felt in small, land-locked countries such as Rwanda and Burundi, in island states, and in the low-rainfall countries of the Sahel. As populations increase, there will be greater pressure for people to migrate to land-abundant countries, particularly where a common border is shared.

3. More land could be devoted to agricultural production

Taking into account the planet as a whole, there is enough farmland. Only 11% of total land area (equal to about 1,500 million hectares) is being used for agriculture. Yet it is estimated that some 3,000 million hectares could be farmed. In other words, the amount of farmland under cultivation today could be doubled, although an important consideration is that much of this new land would be more expensive to develop.
Just as importantly, existing small farmers need access to water, appropriate tools and fertilizer to make their cultivated land really productive. Since life is so precarious for them, they are usually hesitant to adopt new farming practices for fear of failure. They also lack the money — or access to credit — to buy inputs that could improve yields.
It is not necessarily true that the more land people have to cultivate, the less likely they are to suffer from hunger. For instance, although a Chinese farmer has, on average, half as much land to farm as an Indian farmer, India has more than 200 million malnourished people. The same kind of comparison can be made between the Republic of Korea and Bangladesh.
What really counts is the use made of the land. In many hungry countries, it is not unusual to find the best land devoted to growing export crops such as cotton, coffee, tobacco and soybeans. In many cases, good farmland is diverted to urban uses, while only the worst land is used to grow food to feed the people. Though it sometimes makes economic sense to encourage the production of cash crops, a balance needs to be found to ensure that food needs are met.

V. WHY, THEN, DOES HUNGER EXIST?

The causes of hunger are many and varied. Some are of natural origin (drought, crop pests and other natural disasters); but the vast majority are problems related to human poverty. Many of the primary causes of hunger have their roots in the economic, social and political factors which are briefly summarized below.

1. **Agriculture is often denied national priority**. In most countries, governments simply do not give agriculture, fishing and forestry the priority they deserve. Normally, these are minor items in the national budget — in spite of the existing needs in terms of national food and nutritional requirements. Globally, more than US$ 850,000 million are spent each year on armaments; experts say that a tiny fraction of that figure would be enough to end hunger permanently.

2. **Land is scarce or unequally distributed**. As already mentioned, 1,500 million hectares of land are currently being cultivated worldwide. Yet, if land continues to be degraded through soil erosion, chemical pollution and salinization, and lost to highways, airports and industrial or mining uses, the amount of farmland available will certainly not in-

Here in Recife, Brazil, as in many cities in the Third World, high-rise buildings stand in stark contrast to neighbouring slums.

crease — and may even be reduced by one-third — by the year 2000. Developing countries have put a great deal of new land under cultivation during the last 20 years. At the same time, however, rural populations have been growing. To put the situation in perspective, it should also be noted that — with the exception of Latin America — the number of rural families is increasing at a rate that outpaces growth in the available quantity of farmland. This means that the average farm size is shrinking in Africa, Asia and the Near East. At the same time, the number of landless farm workers has risen sharply. Since these smaller farms are often economically less viable, they are eventually sold to larger farmers.

As Table 3 shows, the amount of land per worker has dropped in developing regions, with the exception of Latin America, and forecasts are for this trend to continue at least until the year 2000. In the industrialized countries, on the other hand, the size of farms has increased regularly as agriculture has become increasingly mechanized and many farms have merged.

3. **Farm prices are often too low**. Frequently, farmers are simply not paid enough for their produce. At the same time, the prices peasants pay for tools, fertilizers, seeds and other inputs they need are constantly rising. Low prices for farm products can be the result of price policies that aim to hold down

A small farmer in the People's Democratic Republic of Yemen harvests another crop of potatoes.

Like thousands of villages along Asian coastlines, this fishing community in India is characterized by poor access to social services, low standards of living and few employment opportunities.

Table 3: Arable land farmed per farm worker (in hectares)

	1961-65	1978	2000
Africa	2.37	2.15	2.04
Asia and the Pacific	0.97	0.88	0.76
Latin America and the Caribbean	4.18	4.59	6.05
Near East	2.89	2.67	2.21
Industrialized countries	5.73	9.30	—

Note: Data cover 90 developing countries, excluding China

the price of food for the benefit of the urban consumer. Such a trade-off implies very low and unremunerative prices to the rural sector and little real incentive for increased production. The dilemma of low farm prices — which is a highly complex one — must also be seen in the light of the international trade situation.

4. **The international trade situation is unbalanced**. Some 70% of the world's wealth is found in the developed countries, where only one-quarter of the world's population lives. The remaining three-quarters of the world's people, who live in the Third World, share the remaining 30%.
The disparity of this distribution of wealth is compounded by the trade relations between developed and developing countries. The relationship is often

Hungry goats feed on a solitary Acacia shrub, dramatizing the problem of desertification in the Sudan, where about one-third of the forests have disappeared in the last 20 years.

described as an "unequal" one, since rich countries buy products from poor countries — generally agricultural or raw materials — at low prices, while poor countries buy finished goods such as tractors, machinery, automobiles and even processed foods from industrialized nations at constantly rising prices. In 1960, for example, a developing country could import six tractors in exchange for 25 tonnes of unprocessed rubber; in 1965, that same amount of rubber could be exchanged for three and a half tractors; in 1975, it could be exchanged for only two tractors.

5. **Third World debts are too high**. Largely as a result of international trade imbalances, many developing countries, especially in Latin America and Africa, are faced with insupportable external debts which place tremendous burdens on local economies and agricultural systems.

6. **Many agricultural practices are ecologically harmful**. Economic pressures are forcing many farmers, especially in the developing world, to adopt farming practices which meet short-term needs but cause long-term damage to the environment.

VI. HOW IS HUNGER RELATED TO THE QUALITY OF THE ENVIRONMENT?

Though the size of the earth remains constant, the human population has doubled since 1950. If current trends continue, the human population will grow from 5,000 million in 1988 to 6,000 million by the year 2000. This will mean more mouths to feed and more demands on the agricultural environment.

There is enough land to feed the human population now and in the foreseeable future, but only if **sustainable** agricultural systems are developed and maintained. Sustainable food systems are those which do not impoverish the environment of the people who try to make a living growing and harvesting food.

In the Third World, where over 90% of the projected population increase is expected to occur, the rural poor are being forced into unsound agricultural practices in a desperate struggle for survival. For example, about 11 million hectares of tropical forests are being cleared each year for agriculture and other human demands. This is upsetting ecological balances, often exposing soils which cannot support continued crop production.

Also problematic today is the traditional practice of shifting cultivation in which the soil is left fallow for a long period of time after a harvest to allow the fertility of the soil to build back up. But with today's population pressures and the struggle for improved yields, the fallow periods are being cut back too short to allow for soil fertility to be replenished. Under such conditions, the soil soon loses its fertility and becomes more susceptible to erosion by water and wind.

Polluted waters threaten aquatic life in many parts of the world, as in this harbor in Central Java.

Pinus seedlings started in a nursery in Guinea (insert) have grown to help protect upland watersheds three years later.

- **Water erosion** is commonly found where gently sloping land is left exposed to the effects of heavy rain for any length of time or where steeply sloped land is being unwisely farmed (often, by poor people with no place else to farm).
- **Wind erosion** occurs when soil is left bare of vegetation. It is often the result of the overgrazing of livestock in arid and semi-arid areas. It is one of the key causes of desertification.

If erosion is a sickness of the land, desertification is the death. When a drought strikes, leaving an inadequate amount of rainfall over a prolonged period of time, fragile and damaged soils are especially susceptible to desertification. The African Sahelian zone, a belt of arid and semi-arid land bordering the southern edges of the Sahara desert, has been especially hard hit in recent years.

Even the highly productive farmlands of North America are prone to drought and desertification when proper soil and water conservation measures are not maintained. Most recently, drought conditions in the United States and Canada resulted in severe crop losses and contributed to a reduction in the global reserves of cereals (including wheat, rice, maize and other grains) from 451 million tons in 1986-87 to 288 million tons in 1988-89. This is the lowest level of reserves — in proportion to consumption — since the world food crisis of 1972-74.

VII. WHAT CAN BE DONE TO HELP ELIMINATE HUNGER?

At first glance, many people would say that assistance in the form of food donations (food aid) should be sent to the worst-affected countries by those who have plenty. Certainly this is a first and essential step in emergencies, and nearly 10 million tonnes of cereals are provided each year to poorer countries as food aid. Moreover, FAO estimates that if just 15-20 million tonnes of cereals per year could be perfectly directed to the hungry of the world, all the world's people would at least have adequate energy levels.

But food aid is not a lasting solution to the problem. If poorly planned and delivered, food aid can even have a harmful effect on the country that receives it, by upsetting local customs and eating habits. By depressing market prices, it can cut into the income of local farmers, and it can discourage local production and the use of traditional crops.

Therefore, an action plan against hunger must include the following measures:

1. Promoting greater self-reliance in countries suffering from hunger - hence reducing dependency on imports.

2. Re-examining farm policies in developing countries to make sure that they encourage — rather than discourage — farmers to produce food on a sustainable basis. Policies should aim to ensure fair prices for farm produce, access to the means of production, and wise land and water use.

3. Improving transportation, marketing and storage systems to ensure that available food reaches areas where and when it is needed most.

A variety of economic, social and educational measures are needed to help farm families, such as this one in Indonesia, to produce more food while protecting and improving the quality of life and of the environment.

4. Supporting the efforts of small farmers, youth and women in rural areas to organize themselves for self-help economic activities such as cooperatives and income-generating projects.

5. Re-examining food aid to make sure it reaches the hungry but does not disrupt national production.

6. Strengthening cooperation among developed and developing nations to remove trade barriers and to help stabilize international prices for agricultural commodities.

7. Avoiding overconsumption and the waste of food in all countries.

8. Developing a realistic approach to the problems of large debts owed by many Third World countries and their consequent need to devote inordinate proportions of export earnings to repaying loans. The debt burden hinders the ability of governments to make necessary investments in the food and agricultural sector.

HUNGER, YOUTH AND WORLD FOOD DAY

The fact is that hunger is perhaps the most compelling moral and political problem that today's youth will have to face as the leaders of tomorrow.
As part of their education, young people should learn the facts about world hunger and what they as individuals, and as citizens of their communities and nations, can do to end it. A good way to begin is to participate in **World Food Day**, observed each year on 16 October. Coinciding with the anniversary of the founding of the Food and Agriculture Organization of the United Nations (FAO), World Food Day aims to make the public more aware of the nature and gravity of the world food problem. It also promotes solidarity among people of all nations in their collective effort to eliminate hunger, malnutrition and poverty once and for all.
Young people can participate in World Food Day through many different activities:

1. Asking governments to pay special attention to food and nutrition in school programmes.

2. Holding essay, drawing and other kinds of contests on food and hunger topics.

3. Staging workshops and debates on the causes of hunger and on its solutions.

4. Mounting exhibitions.

5. Publishing special articles in youth and school newspapers.

6. Visiting farms, agricultural fairs, farmers' markets, etc.

7. Viewing educational films or slide presentations on food issues, or having special radio and TV programmes prepared by young people themselves.

8. Learning about local or national organizations involved in the fight against hunger, and how concerned individuals can help.

9. Learning about the many challenging careers related to agriculture, food technology, economics, rural sociology, etc.

World Food Day is a reminder of the basic human right to food, without which life itself is meaningless. In a world in which so many people go hungry, World Food Day helps put priorities in the right order.

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